St. Louis County (HW)
Scientific Associates, Inc.



STATE OF MISSOURI

Mel Carland Governor David A Shorr, Director

## DEPARTMENT OF NATURAL RESOURCES

- DIVISION OF ENVIRONMENTAL QUALITY

St. Louis Regional Office 10805 Sunset Office Drive, Suite 100 St. Louis, MO 63127-1017 (314)822-0101

FAX (314)822-0943

January 18, 1996

CERTIFIED MAIL #Z 033 652 199 RETURN RECEIPT REQUESTED

Mr. Peter J. Renaud, President Scientific Associates, Incorporated 6200 South Lindbergh Boulevard St. Louis, MO 63123 JAN 24 1996

HAZARODUS WASTE PROGRAM MISSOURI DEPARTMENT OF NATURAL RESOURCES

Dear Mr. Renaud:

LOW #96-SL.003

This Letter of Warning is resultant of a hazardous waste management inspection conducted on January 8, 1996, by Mr. Thomas Sims of my staff at Scientific Associates, Incorporated (SAI) at 6200 South Lindbergh Boulevard, St. Louis, Missouri. This inspection was conducted as a regional office initiative under the authority of the Resource Conservation and Recovery Act of 1976 (RCRA) and Subsection 260.375(9) and Section 260.377 of the Missouri Hazardous Waste Management Law.

Please review the enclosed Inspection Record and Checklist completed by Mr. Sims as a part of the inspection. The citations circled on the checklist indicate items of non-compliance found during the inspection. The violations observed, which resulted in the citations, are explained in the "Comments" section of the checklist.

In order to return the facility to compliance, the following is required:

- 1. Clearly mark each satellite accumulation container with the beginning date of hazardous waste accumulation.
  - SAI must certify that each satellite container was marked with the beginning date of accumulation and that all future containers will be marked as required.
- 2. Post the emergency coordinator's name and telephone number; the locations of spill-control equipment, fire alarm(s), and fire-control equipment; and the fire department's telephone number near the telephone(s) available to personnel handling hazardous waste.

SAI must certify that the required information is posted and updated as necessary.

Scientific Associates, Inc. porated (HW) January 18, 1996
Page Two

Include a facility sketch to show the location(s) where the information is posted and a copy of the information with the certification.

3. Enter the Missouri Manifest Document Number (the facility's Missouri Generator's Identification Number followed by a consecutive shipment number), the license plate number and state of registration of the waste-carrying portion of the vehicle, and the specific gravity of each waste listed with total quantity specified volumetrically (gallons, liters, cubic yards, and cubic meters) on future Hazardous Waste Manifests.

SAI must certify that the information specified above and other required Missouri information specified in Paragraph 10 CSR 25-5.262(2)(B)2 of the Missouri Hazardous Waste Management Regulations will be entered on future manifests.

Please respond to this Letter of Warning in writing by <u>February 15, 1996</u>. Include certifications and materials as specified above with the response. Direct the response and any questions you may have to Mr. Sims at this office, and copy the response to Ms. Kathy Flippin, Chief, Enforcement Unit, Hazardous Waste Program, P.O. Box 176, Jefferson City, Missouri 65102.

Sincerely,

ST. LOUIS REGIONAL OFFICE

het S. P. Eck

Robert S. P. Eck Regional Director

RSPE:TWS:mc

**Enclosures** 

e. HWP



MO 780-0798 (6-92)

MISSOURI DEPARTMENT OF NATURAL RESOURCES HAZARDOUS WASTE PROGRAM SMALL QUANTITY GENERATOR

INSPECTION RECORD AND CHECKLIST



SOG PAGE 1 OF 5

ONLY FOR FACILITIES THAT GENERATE/ACCUMULATE < 1000 Kg (2,200 lbs	or approximatel	WISSOWAGEC PR	OGRAM	
NAME DATE	W(1551)	ENERA NEMBE	er of	
Scientific Associates, Inc (SAI) 1-8.	-96 NA	UHAL HOSOLOG	26/8063	
nontess.	1			
6200 S. Lindbergh Blud. NIMBER OF EMPLOYEES YEARS AT SITE	7	00.213	56 MBER (3,4)	
		PI IO 7		
St. Louis FACILITY REPRESENTATIVE(S), TITLE(S) Mir. Dennis P. Fleming, Director of	E(1002):	487-6	116	
Mr. Bill Lake, Manager of Quality Assurance	Compliance			
DESCRIPTION OF THE FACILITY'S OPERATIONS AND PLANT				
		1		
SAI is a chemical, biological, microbio	ological, as	nd toxico	logical_	
contract testing laboratory that mainly	provides	quality	control	
and assurance testing of raw material	sant fin	ished p	roducts	
for various chemical, phurmaceutical,				
industries, SAI also provides other services.			100	
development, analyses of compliance-manit			>	
consultation and support in the registration and approval of new				
products, SAI utilizes various analytical			1	
and in-vivo (with rodents) techniques and inste			I	
Will's Spectrophotometry, HPLC, GC, TLC/PC, A.			i	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
" wet " methods,				
WASTE STREAMS			91	
DESCRIBE EACH WASTE STREAM GENERATED INCLUDING THE PRODUCTION PROCESS	GENERATION RATE	EPA ID NUMBER	DISPOSITION	
Waste Flammable Liquid - Waste solvents from sample	~ 35gal.	DOOL	cum - chemica	
preparations and extractions, laboratory equipment 1. cleaning, and instrumentation (Expurge and sample carrier	~ 55gai./		Services Inc	
"cleaning, and instrumentation (Ex: purge and sample -carried	- Imo.		Millington, TN TND000773186	
solvents From HPLC), Methanel, Ethanel, Herane Toliese			1 14 10 000 7 73 13 6	
Metenitrile, Chlore torm (DO22), and Methylene Chloride				
pare solvents included in this waste stream.				
	less than	1/2 2 1111	Controlleditios to	
Various "one time" generations of expired -dated reagents to and other materials and samples found huxurdous samples	100 kg/yr.	berious	Division	
Found horardous usually returned to the facility that	3/91.		Menomenee	
Submitted the samples			WID003467148	
₹.				
1 1 m 1 1 m 1 1 m 1 1 m 1 m 1 m 1 m 1 m		2		
3. Special waste: Pharmacquitical Waste and Medical Waste -		N'A		
5. handled and transported under BFI - incinerated and				
CHECK ALL THAT APPLY (Specify if possible)				
	aus O			
	aste Landfill			
	Vater Pretreatmer	*		

AL GENERAL		
1: Registered as a HW Generator - Section 260.380.1 (1) RSMo and 10 CSR 25-5.262 (2)(A)	GGR	COMMENTS
Facility determines if waste is hazardous - 10 CSR 25-5.262(1) incorporating 40 CFR 262.11	GGR	
3 Utilizes a licensed hazardous waste transporter - Section 260.380.1	GGR	chemical Waste Management, Inc., H-1610
4: MUtilizes authorized HW TSD or RR facility Section 260.380.1(7) RSMo	GGR GGR	
PART 1: WALK-THROU	GH IN	SPECTION
B. PRET ANSPORT CONTAINERIZA ON & STOR GE		
1. MoStorage does not exceed 180 days (270 days if transported > 200 miles) 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(e)	GSQ	One 55-gallondrum and three 35-gallon
22 Picontainers in good condition 10 CSR 25-5.262(1) incorporating 40 CER 262.34(d)(2) referencing 40 CFR 265.1712	GPT	drums all full, except for one of the
37 Waste compatible with container - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(2) referencing 40 CFR 265.172	GPT.	35-galloudrums was opproximately 2/3 full) of ignituble waste (waste stream +1)
4) Containers closed in storage 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(2) referencing 40 CFR 265.173(a)	GPT	located in the storage area at the cost end of the property near the outside well
5. II Containers storing incompatible waste separated or protected from each other-by a dike, berm or wall \$ 10 CSR 25-5.262(1) incorporating 0 CFR 262.34(d) (2) referencing 40 CFR 265.177(c)	GPI	of Bldy. C.
6. Containers of Ignitable or reactive waste stored > 50 ft. from property line (or meet requirements) - 10 CSR 25-5.262 (2)(C)5. referencing 40 CFR 265.176 as amended by 10 CSR 25-7.265 (2)(I)3.	GOR	
7. Waste packaged/labeled/marked per DOT during entire on-site storage period - 10 CSR 25-5.262 (2)(C)1.	GOR	
8. Date of accumulation marked on containers - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 262.34(a)(2)	GPT	
9. Containers protected from contact with accumulated liquids - 10 CSR 25-5.262(2)(C)2.B.(II)	GOR	
10. Containers clearly marked "hazardous waste" - 10 CSR 25-5.262(I) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 262.34(a)(3)	GPT	
11. Facility inspected and maintained (weekly) - 10 CSR 25- 6.262(2)(C)2.A.(II)	GPT	
12. Daily inspection of areas subject to spills, ie. waste handling areas - 10 CSR 25-5.262(2)(C)2.A.(II)	GOR	
13. Adequate aisle space is available - 10 CSR 25-5.262(1) incorporating NA 46 CFR 262.34(d)(4) referencing 40 CFR 265.35	GPT	
14. Placards available for transporter - 10 CSR 25-5.262(1) incorporating 40 CFR 262.33	GPT	
15. "No Smoking" signs conspicuously placed by ignitable or reactive wastes - 10 CSR 25-5.262(2)(C)2.D.(II)	GOR	
16. Waste oil containers in good condition, labeled and closed - 10 CSR 25-11.010(3)(C)	GOR	
C. SATELLITE ACCUMULATION		
1. Containers kept closed - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(i) referencing 40 CFR 265.173	GPT	Several one-gallon glass jugs accumulating
2. Containers in good condition - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(i) referencing 40 CFR 265.171	GPT	of the Chomistry Dept. located in Blds. F.
3. Waste compatible with container - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(i) referencing 40 CFR 265.172	GPT	located in storage area behind Elda. Canifer
4 Quantities accumulated not exceeding 55 gal. (1 quart of acutely-hazardous wastes) - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)	GPT	Several one-gallen glass jugs accumulating waste solvents placed in exhaust hoods of the Chemistry Dept. located in Bldg. F. The containers are emptied into u down located in storage area behind Bldg. C ence week. Waste stream #1
5. Satellite containers go to storage within 3 days of filing - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)3.	GPT	
Container marked identifying contents & beginning date - 10 CSR 25-5.262(2)(C)3.	GOR	Hove satellite containors not marked with beginning date of accumulations

7 Donad is catallity asset to 1					
/. Lir Stored in satellite areas less th	han 1 year - 10 CSR 25-5.2	262(2)(C)3.	GOR	COMMENTS	
D. PREPAREDNESS AND PREV	ENTION AND EMERG	ENCY PROC	EDUR	ES	19
Facility operated and mainta emergency 10 CSR 25-5.26 referencing 40 CFR 265.312	alned to minimize the po	R 262.34(d)(4)		COMMENTS	
2. Adequate and proper spill equipment available (fire blant and properly tested and maint. 40 CFR 262.34 (d)(4) reference	control, decontamination kets, respirators, SCBA, at ained - 10 CSR 25-5.262 (1	on and safety bsorbents, etc.) ) incorporating	GPT		
3. Adequate water supply and fire incorporating 40 CFR 262.34(			GPT		
4. Communication and emerger 10 CSR 25-5.262(1) incorpora CFR 265.33			GPT		
5 Emergency coordinator's nam - 10 CSR 25-5.262(1) incorpor			GSQ		
6. Telephone number of fire de 25-5.262(1) incorporating 40 (		none - 10 CSR	GSQ	Information not posted at teleph available to personnel hundling waste in Buildings A or C	lunces
7. Location of fire extinguisher a phone - 10 CSR 25-5.262(1) in			GSQ	waste in Buildings A or C	MAI ELENCE DIS
8. Employees familiar with wast -10 CSR 25-5.262(1) incorpor	te handling and emergen ating 40 CFR 262.34(d)(5)	cy procedures )(iii)	GSQ		
9. Device in the hazardous wast emergency assistance - 10 C 262.34(d)(4) referencing 40 C	CSR 25-5.262 (1) incorpo		GPT		
10. Telephone or two-way radio fire or police dept 10 40 CFR 262.34(d)(4) reference	O CSR 25-5.262 (1) i	mmoning local incorporating	GPT		
E. SQG TANKS					
TANK DESIGNATION	CONTENTS	CAPACI	TY	CONTAINMENT	AGE
1. 12 p					
2.					
3.					
3.  1: Uncovered tanks have 2 ft. fre 25-5.262(1) incorporating 40  A 265.201(b)(3)	CFR: 262 34(d)(3), refere	ncing 40 CFR	GPT	COMMENTS	
3.  1: Uncovered tanks have 2.ft. free 25-5.262(1) incorporating 40  25-5.262(1) incorporating 40  265.201(b)(3)  2: Continuously feet tanks equip by-pass system 10 CSR 25-5.	CFR: 262:34(d)(3), reference of the control of the	tem or a proper FR 262,34(d)(3)	GPT GPT	COMMENTS	
3.  1. Uncovered tanks have 2 ft. free 25-5.262(1) incorporating: 40 MA 265.201(b)(3)  2. Continuously fed lanks equip by-pass system 10 CSR 25-5 referencing 40 CFR 265 201(b) 3 Waste and/or treatment meth 5.262(1) incorporating 40 (MA 265.201(b)(2))	CFR:262:34(d)(3), reference with a feed cut-off system (262(1)) incorporating 40 Cf (4))(4))  od is compatible with tan CFR: 262:34(d)(3), reference compatible with tan CFR: 262:34(d)(d)(d)(d), reference compatible with tan CFR: 262:34(d)(d)(d), reference compatible with tan CFR: 2	tem or a proper FR 262.34(d)(3) k = 10 CSR 25- ncing 40 CFR	GPT.	COMMENTS	
3.  1. Uncovered tanks have 2 ft. free 25-5.262(1) incorporating 40 WA 265.201(b)(3)  2. Continuously led tanks equipment by-pass system 10 CSR 25-5. The referencing 40 CFR 265.201(b) 3. Waste and/or treatment meth 5.262(1) incorporating 40 (M/ 265.201(b)(2))  4. Incompatible wastes not plant incorporating 40 CFR 262.34(	CFR 262 34(d)(3) reference with a feed cut-off system (262 (1) incorporating 40 Cf (26)(4))  od is compatible with tancer (262 34(d)(3) reference (262	tem or a proper FR 262,34(d)(3) k = 10 CSR 25- ncing: 40 CFR SR 25-5.262(1)- 265.201(1)	GPT GPT	COMMENTS	
3.  1. Uncovered tanks have 2 ft. free 25-5.262(1) incorporating 40 MA 265.201(b) (3)  2. Continuously feel lanks equip by-pass system 10 GSR 25-5 referencing 40 CFR 265 201(b) (3)  Waste and/or treatment meth 5.262(1) incorporating 40 (MA 265.201(b) (2))	CFR 262.34(d)(3) referenced with a feed cut-off system of the cut-	tem or a proper FR 262,34(d)(3) k = 10 CSR 25- ncing: 40 CFR SR 25-5.262(1) 265.201(1)	GPT GPT	COMMENTS	
3.  1. Uncovered tanks have 2.ft. free 25-5.262(1) incorporating 40  2. Continuously feet tanks equip by-pass system 10 CSR 25-5 referencing 40 CFR 265.201(b) 3. Waste and/or treatment meth 5.262(1) incorporating 40.  4. Incompatible wastes not plant from 10 croporating 40 cr	CFR 262.34(d)(3), reference with a feed cut-off system of the cut-	lem or a proper FR 262,34(d)(3) k = 10 CSR 25- noing 40 CFR SR 25-5.262(1) 265,201(1) rom sources of rating 40 CFR ated/stored; In CSR 25-5.262(1)	GPT GPT GPT GPT GPT	COMMENTS	
3.  1 Uncovered tanks have 2 ft. free 25-5.262(1) incorporating 40  265.201(b)(3)  2 Continuously feet tanks equip by-pass system 10 GSR 25-5.  3 Waste and/or treatment meth 5:262(1) incorporating 40.  4 265.201(b)(2).  4 Incompatible wastes not plan incorporating 40 CFR 262.34(5).  5 Ignitable or reactive wastes ignition or reaction 10 CM 262.34(d)(3) referencing 40 CFR 262.34(c).  6 Ignitable or reactive wastes accordance with NFPA's buffer incorporating 40 CFR 262.34(d).  7 Volatiles with vapor pressure open tanks - 10 CSR 25-5.262.	CFR 262.34(d)(3) refered with a feed cut-off system of the compatible with tancer 262 (1) incorporating 40 CFR 262.34(d)(3) refered as tank - 10 Cfd (3) referencing 40 CFR endered safe/protected from the compatible with tancer 265.262(1) incorpor (25.5.262(1)) incorpor (25.5	tem or a proper FR 262,34(d)(3)  k = 10 CSR 25- ncing 40 CFR  SR 25-5.262(1) 265.201(1)  rom sources of rating 40 CFR  ated/stored; in CSR 25-5.262(1) 265.201(e)(2)  not placed in	GPT GPT GPT GPT GPT	COMMENTS	
3.  1 Uncovered tanks have 2 ft. free 25-5.262(1) incorporating 40  265.201(b)(3)  2 Continuously feet tanks equiporating by-pass system 10 CSR 25-5.  4 referencing 40 CFR 265.201(b) (3)  Waste and/or treatment meth 5.262(1) incorporating 40.  4 Incompatible wastes not plant incorporating 40 CFR 262.34(ft) incorporating 40 CFR 262.34(ft) (3) referencing 40 CFR 262.34(ft) (3) referencing 40 CFR 262.34(ft) incorporating 40 CFR 262.34(ft) incorp	CFR 262.34(d)(3), refered with a feed cut-off system of the cut-of	tem or a proper FR 262,34(d)(3)  k = 10 CSR 25- ncing = 40 CFR  SR 25-5.262(1) 265.201(1)** rom sources of rating = 40 CFR  ated/stored, In CSR 25-5.262(1) 265.201(e)(2) I not placed in	GPT GPT GPT GPT GPT GPT	COMMENTS	

10. [	freeboard each operating day - 10 CSR 25-5.262(1) incorporating 40	GPT	COMMENTS
11. [ NA	Weekly inspection of confinement structure, construction materials and general area for leaks, corrosion or discharges - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(3) referencing 40 CFR 265.201(c)5	GPT	
12. [	Waste oil tanks in good condition, labeled and closed - 10 CSR 25- 11.010(3)(C)	GOR	
	PART 2: RECOR	DS IN	SPECTION
F. M.	ANIFESTS	1 × 7	
1.4	Facility uses manifest system or wastes reclaimed under contractual agreement - 260.380.1(6) RSMo, and 10 CSR 25-5.262(2)(B)	GMR	
2. []	Generator maintains a copy of the contractual agreement on-site - 10 CSR 25-5.262(1) incorporating 40 CFR 262.20(e)(2)	-	
3. 🔃	Records maintained for a 3-year period - 10 CSR 25-5.262(1) incorporating 40 CFR 262.40(a)	GRR	
4.	Generator's MO) & EPA I.D. Numbers - 10 CSR 25-5.262(2)(B)	GOR	mo IDI not included on manifest
5.	Manifest document, ID and consecutive shipment numbers - 10 CSR 25-5.262(2)(B)2.A	T	
6. 🗵	Generator's name, address and phone number - 10 CSR 25-5.262(2)(B)1.		MO Manifest Document Number not included on manifest
7.0	All transporters' names, phone numbers, license plate #s, MO & EPA I.D.#'s - 10 CSR 25-5.262(2)(B)2.	GMR	Lisconce plate # of waste-carrying Portion of reliate not included on
	Designated facility name, address, phone, MO & EPA I.D. #, - 10 CSR 25-5.262(2)(B)1.	GMR	marrifest
9. 🖸	DOT shipping name, Hazard Class and waste I.D. # (RQ - if required) - 10 CSR 25-5.262(2)(B)2.	GMR	
10.	Containers, quantity and specific gravity designated - 10 CSR 25-5.262(2)(B)2.	GMR	Specific gravity of waste measured valuemetrically not included an manifest
	Manifest signed and dated - 10 CSR 25-5.262(2)(B)1.		Correctly managed as
12.	25-5.262(2)(B)4.A	GOR	Same as # 5 4, 5, 7, and 10 a house
	Manifest continuation sheets are not used - 10 CSR 25-5.262(2)(B)1	GOR	
14.	45 days - 10 CSR 25-5.262(2)(D)2.C		
15. 🔟	Summary Manifest Reports and manifest copies sent to DNR quarterly - 10 CSR 25-5.262(2)(D)1	GOR	
	is restricted from land disposal - 10 CSR 25-7.268(1) incorporating 40 CFR 268.7(a)	GLB	
	"Land-Ban" notification/certification sent with manifests or with 1st shipment under a tolling agreement & retained on-site for 5 years - 10 CSR 25-7.268(1) incorporating 40 CFR 268.7(a)	GLB	
	Notification/certification includes correct EPA Hazardous Waste number, corresponding treatment standards, manifest number, and waste analysis data - 10 CSR 25-7.268(1) incorporating 40 CFR 268.7(a)	GLB	
	REPAREDNESS AND PREVENTION		
	Arrangements with local emergency agencies - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 265.37	GPT	COMMENTS
	incorporating 40 CFR 262.34(d)(5)(i)	GSQ	
THE OWNER WHEN	ASTE OIL	iz a famil	
NA	Waste oil is managed properly and not disposed of Into the environment 1 10 CSR 25-11.010(1)(D).	GOR	COMMENTS
NA	waste - 10 CSR 25-11.010(1)(C)2.	GOR	
	Registered as waste oil generator if gen./accum. 220 lb 10 CSR 25-11.010(2)(A)	GOR	
4.	Written waste oil contract maintained - 10 CSR 25-11.010(4)(C)	GOR	
5. 🛺	Uses a licensed transporter and receiving facility - 10 CSR 25-11.010(4)	GOR	

L RESOURCE RECOVERY		
1.  RR certification for energy recovery or reclamation of waste oil or hazardous waste on-site = 10 CSR 25-9.020(1)(A)3.	GOR	COMMENTS
72. Still bottoms or RR residues disposed of properly - Section 260.380.1(5)	GÖR	
3. Facility is classified as U, R1, or R2 accurately - 10 CSR 25-9.020(3)(A).	GOR	
4. Facility meets the operating conditions of certification - 10 CSR 25-NA 9.020(3).	GOR	
5. Facility has submitted a written request and received approval from the DNR for all changes in operation including closure - 10 CSR 25-9.020(3)(E)1 and 2.	GOR	
6. Facility report submitted to DNR quarterly - 10 CSR 25-9.020(3)(E)6. referencing 10 CSR 25-7.264(2)(E)3.	GOR	
7. Facility maintains a complete written operating record - 10 CSR 25-9.020(3)(E)5. referencing 40 CFR 264.73(b)(1) and (2) as modified by N-A 10 CSR 25-7.264(2)(E)2.	GOR	
8. Facility has notified EPA and the state that it qualifies for a small quantity on-site burner exemption or has interim status or a permit of it burns hazardous waste on-site - 10 CSR 25-7.266(1) incorporating 40 CFR 266.108 and 40 CFR 266.103.	GOR	
CHECKLIST KEY		
Check the if in compliance.		
Circle the if not in compliance and provide comment.		
N/A = Not Applicable		
A shaded item is a serious deviation from the requirements (Class I v	iolatio	(nc)
An unshaded item is a significant deviation from the requirements (C	lass II	l violation unless conditions warrant Class I)
COMMENTS: INCLUDE DISCUSSION OF FACILITY'S WASTE MINIMIZATION PLAN		
Encl: manifests and LDR		
Encl: manifests and LDR facility sketch		
,		
INSPECTOR'S SIGNATURE		DATE
		1-896
мо 780-0798 (6-92)		SOG PAGE 5 OF